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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,367	04/02/2001	Koji Obata	450100-03146	7171

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EXAMINER	
TANG, KAREN C	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,367	OBATA ET AL.	
	Examiner	Art Unit	
	Karen C. Tang	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

- This action is responsive to the amendment and remarks file on 12/22/05.
- Claims 1-11 are presented for further examination.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1- 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiriyama (US 5,561,466) in view of AAPA (Applicant Submitted Prior Art – Background Invention).

1. Referring to Claims 1, 3 and 4, Kiriyama disclosed a data multiplexer for performing time division multiplexing of a plurality of bit streams, said data multiplexer comprising: an extracting means for extracting information (demultiplexing) necessary for multiplexing processing from each of said plurality of bit streams (refer to Col 3, Lines 1-26);
a first calculating means for calculating a time division multiplexing cycle (Examiner interprets that each cycle is equivalent to each of the each VBR/ABR stream of data that supply to the buffer, Time period, refer to Col 5, Lines 1-45) for each of said plurality of bit streams, such that a separator separates multiplexed data by a specified method on the basis of said information extracted by said extracting means (refer to Col 9, 10, 13 and 14); and
a multiplexing means for performing time division multiplexing of said plurality of bit streams (it is VBR and ABR cells are different bit streams, refer to Col 9 and 10) on the basis of a result

calculated by said first calculating means (refer to Col 10); wherein different multiplexing cycle equations are used to calculated multiplexing cycles of each of said plurality of bit streams (VBR is one calculation, CBR is different calculation, refer to Col 6, 9 and 10, which produce by different processor/controller).

Kiriyama did not expressly indicate said different multiplexing cycle equations derived using rates of transfer of data between buffers according to a virtual decoder model conforming to a Moving Picture Experts Group (MPEG) system standard.

AAPA disclosed wherein the different multiplexing cycle equation are used by said first calculating means to calculate multiplexing cycles of each of said plurality of bit streams, said different multiplexing cycle equations derived using rates of transfer of data between buffers according to a virtual decoder model conforming to a Moving Picture Experts Group (MPEG) system standard (refer to 0002-0018).

At the time of the invention, it would have been obvious of ordinary skill in the art to incorporate Kiriyama and AAPA to incorporate the calculating means by utilizing the rate of transfer of data between buffers according to the MPEG.

The suggestion/motivation would have been that Kiriyama disclosed the need to find the buffer occupancy information (refer to Col 7, 8 and 9).

2. Referring to Claim 2, Kiriyama disclosed a virtual data buffer (buffer memory, refer to Col 7, Lines 60-67) of said separator (refer to Col 3), wherein said multiplexing means determines an order in which said plurality of bit streams (it is VBR and ABR cells are different bit streams, refer to Col 9 and 10) are multiplexed (refer to Col 7, Lines 1-25).

Kiriyama did not indicate calculate the occupancy rate for buffer.

AAPA disclosed calculate the occupancy rate for buffer (refer to 0003-0019).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Kiriyama and AAPA to calculate the occupancy rate for the buffer.

The suggestion/motivation would have been that Kiriyama disclosed the need to find the buffer occupancy information (refer to Col 7, 8 and 9) and also that both invention utilized multiplexing/demultiplexing technology to calculate the desire information.

3. Referring to Claim 5, Kiriyama disclosed wherein a bit stream is a video stream (refer to Col 7).

4. Referring to Claim 6, Kiriyama disclosed wherein a bit stream is an audio stream (refer to Col 7).

5. Referring to Claim 7, Kiriyama disclosed wherein a bit stream is a system data stream (audio/video stream is the system data stream, refer to Col 7 and 8).

6. Referring to Claim 10, Kiriyama disclosed as access unit information detector for extracting access unit information (demultiplexer device, refer to Col 9); and a multiplexing scheduler (processor 55, refer to Col 7) means for generating schedule information by using said access unit information.

7. Referring to Claim 11, Kiriyama disclosed the steps of: extracting access unit information from an access unit information detector (demultiplexer device, refer to Col 9); and generating schedule information from a multiplexing scheduler (processor 55, refer to Col 7) means by using said access unit information.

8. Referring to Claim 8, Kiriyama disclosed transfer usage of buffer and plurality of bit streams (refer to Col 7).

Kiriyama did not expressly indicate transferring data utilized leaking method, wherein said specified method is a leak method that is used to transfer said plurality of bit streams between buffers.

AAPA indicate transferring data utilized leaking method, wherein said specified method is a leak method that is used to transfer said plurality of bit streams between buffers (refer to page 7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Kiriyama, and AAPA due to the fact that need to calculate delay for the buffer occupancy and efficiency.

The suggestion/motivation would have been that by utilizing the leaking method to transfer data between buffers, to reduce the error while delivering data information, so that the data wouldn't be loss.

9. Referring Claim 9, Kiriyama disclosed transfer usage of buffer and plurality of bit streams (refer to Col 7).

Kiriyama did not expressly indicate transferring data utilized vbv_method, wherein said specified method is a leak method that is used to transfer said plurality of bit streams between buffers.

AAPA indicate indicates transferring data utilized vbv_method, wherein said specified method is a leak method that is used to transfer said plurality of bit streams between buffers (refer to Page 8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Kiriyama, and AAPA due to the fact that need to calculate delay for the buffer occupancy and efficiency.

The suggestion/motivation would have been that by utilizing the vbv-delay method to transfer data between buffers, to reduce the error while delivering data information, so that the data wouldn't be loss.

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C. Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-F 7 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571)272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER

KT
Karen Tang
3/10/06